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## THE EFFICIENCY OF SAIREI-TO FOR RETROPERITONEAL FIBROSIS : TWO CASE REPORTS

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The conventional approach for management of retroperitoneal fibrosis (RF), an inflammatory process of retroperitoneal fibro-adipose tissue, leading to the compression and obstruction of the ureters and other adjacent organs is ureterolysis with omental wrapping, and an effective alternative to surgery is immunosuppressive medication such as oral corticosteroids.

Sairei-to (TJ-114) is a traditional herbal medicine used for the treatment of RF in Japan. It has both anti-inflammatory and anti-allergic effects. Here we report two cases of RF successfully treated with Sairei-to. One case was idiopathic and the other was caused by artificial graft-induced vasculitis. Both cases were treated with Sairei-to following the decompression of uremia by percutaneous nephrostomy or indwelling ureteral stents. There was hardly any ureteral obstruction three months after the administration of Sairei-to. They have been doing well for 12 and 26 months.

Sairei-to rarely causes side effects such as immunodeficiency, gastro-duodenal ulcer and osteoporosis that often accompany long-term administration of corticosteroids. Sairei-to is a safe and effective medicine for the treatment of RF. We therefore recommend Sairei-to as an alternative for corticosteroid therapy.

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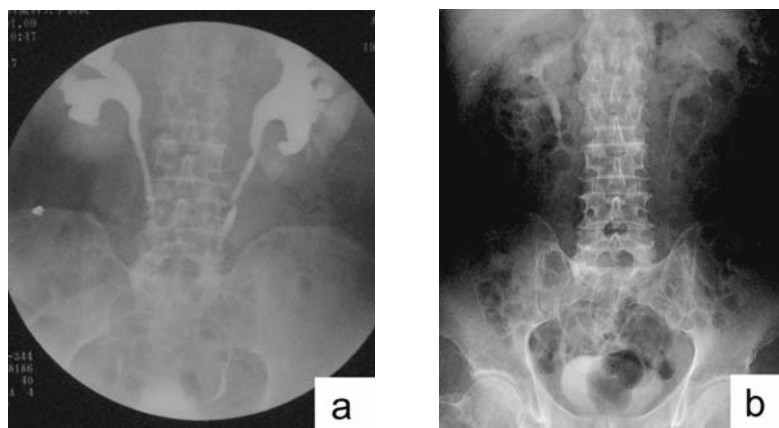
**Key words** : Sairei-to, Chinese traditional medicine, Retroperitoneal fibrosis, Steroid

### INTRODUCTION

Retroperitoneal fibrosis (RF) is an inflammatory process of retroperitoneal fibro-adipose tissue, leading to the compression and obstruction of the ureters and other adjacent organs. It is idiopathic in two-thirds of the cases and numerous causes have been reported for the other one-third, including drugs, malignancies, infections, radiation, and other inflammatory conditions. The cause of idiopathic RF is unknown, but evidence are now accumulating that RF is a manifestation of immune response<sup>1)</sup>.

Ureterolysis with omental wrapping is the traditional manifestation. Nevertheless, it does not always prevent the recurrence of ureteral obstruction and is associated with substantial morbidity and occasional mortality<sup>2)</sup>. Immunosuppressive medication such as corticosteroids provide an effective alternative to surgery<sup>2,3)</sup>.

Sairei-to (TJ-114) is a traditional herbal medicine and is sometimes used for the treatment of RF in Japan<sup>4,5)</sup>. It has both anti-inflammatory and anti-allergic effects. We report two cases of RF successfully treated with Sairei-to.



**Fig. 1.** Patient was a 64-year-old man with idiopathic retroperitoneal fibrosis presented in case 1. (a), Retrograde pyelography (RP) with bilateral hydronephrosis, medial deviation and narrowing of bilateral ureter. (b), Intravenous pyelography (IVP) after administration of Sairei-to for four months.

## CASE REPORTS

### Case 1

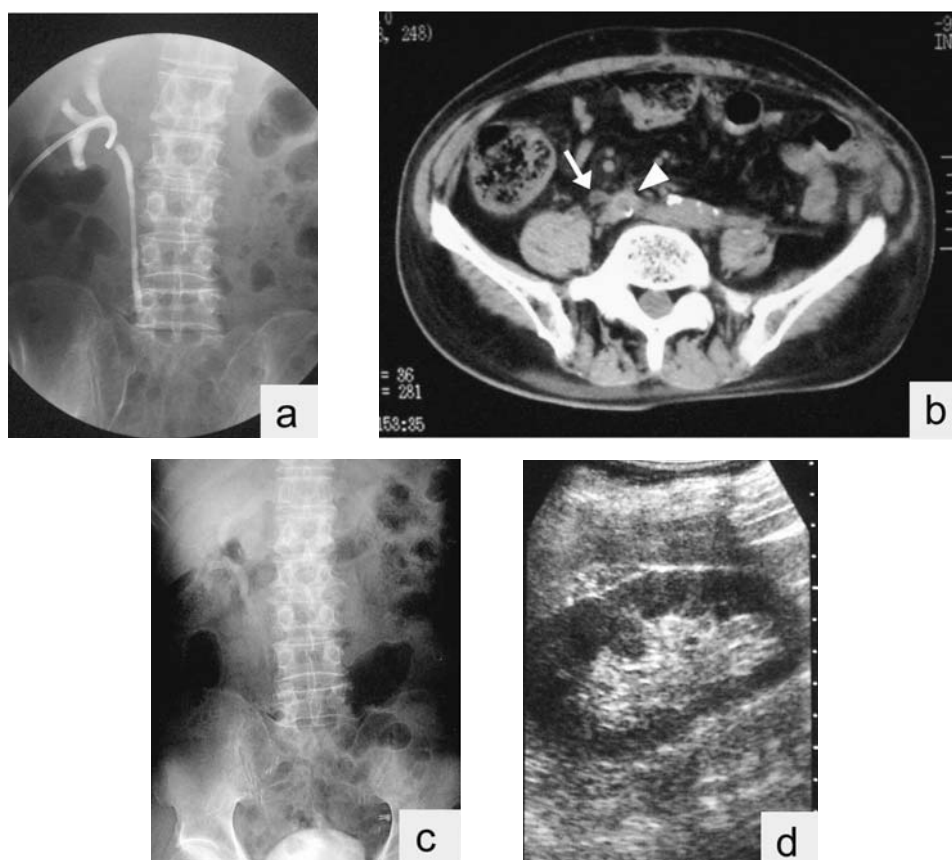
A 64-year-old man was referred to our hospital with bilateral pretibial pitting edema lasting six months. Laboratory evaluation demonstrated slight elevation of serum creatinine level (1.5 mg/dl). Ultrasonography and computerized tomography (CT) showed bilateral hydroureteronephrosis but failed to reveal any ureteral or periureteral mass. Urine test was normal and urine cytology was class II. Retrograde pyelography showed medial deviation and diffuse narrowing of bilateral ureter and the loss of ureteral movement (Fig. 1a). Under the diagnosis of idiopathic retroperitoneal fibrosis, he was followed without particular treatment. One year after his first visit, renal insufficiency progressed while the serum level of creatinine elevated from 1.5 to 4.0 mg/dl over a month. Left nephrostomy and right ureteral stenting was performed. He was informed as described below and consented to receive administration of Sairei-to. 1) Although administration of corticosteroids is the most commonly employed medical management for RF, it could be associated with

severe adverse effects such as immunodeficiency, gastric ulcer and osteoporosis. 2) Sairei-to has both anti-inflammatory and anti-allergic effects. It is used for the management of chronic glomerulonephritis and other immunological disorders in Japan and is known to be rarely accompanied by side effects even when administered for a long time. 3) Sairei-to is not commonly used for the treatment of RF. Nevertheless, the efficacy for RF has been shown in some recent Japanese reports.

He was administered 9.0 g of oral Sairei-to per day. Because there was hardly any ureteral obstruction, left nephrostomy tube and right ureteral stent were removed three and five months after the beginning of drug therapy, respectively. He has continued to receive Sairei-to and is doing well for twelve months without residual impairment (Fig. 1b). His serum level of creatinine was stable at 1.1–1.5 mg/dl.

### Case 2

A 76-year-old man, who had received left nephrectomy 33 years before, was pointed out the defect of right external iliac artery and aneurysm of common and internal iliac artery. He underwent aneurysmectomy



**Fig. 2.** Patient was a 76-year-old man with retroperitoneal fibrosis caused by artificial graft-induced vasculitis presented in case 2. (a), Antegrade pyelography (AP) with right hydro nephrosis and obstruction of the ureter at the level of 5th lumbar (arrow head). (b), Computerized tomography (CT) showed hydroureter and vasculitis at the same level of obstruction of the ureter shown in AP. An arrow indicates ureter and an arrow head indicates artificial graft. (c), IVP after administration of Sairei-to for one year. (d), Ultrasonography (US) of right kidney at the same time with (c) showed no hydronephrosis remaining.

**Table 1.** Components of Sairei-to

Bupleurum Root	7.0 g
Alisma Rhizome	5.0 g
Pinellia Tuber	5.0 g
Scellaria Root	3.0 g
Atractylodes lancea Rhizome	3.0 g
Jujube Fruit	3.0 g
Chuling	3.0 g
Ginseng Root	3.0 g
Hoelen	3.0 g
Glycyrrhiza Root	2.0 g
Cinnamon Bark	2.0 g
Ginger Rhizome	1.0 g

Note: 9.0 g of this product contains 6.0 g of extract obtained from fresh mixed in the above ratio.

and aortoiliac bypass surgery. A month from the arterial operation, he visited our hospital with anuria. Ultrasonography showed empty bladder and right hydronephrosis. Abnormal laboratory values were serum creatinine concentration (9.2 mg/dl), BUN (61 mg/dl) and potassium (6.2 mEq/l). CT showed ureteral involvement with fibrosis around the artificial graft (Fig. 2b). For the treatment of post-renal acute renal failure, right nephrostomy was established (Fig. 2a). His renal function soon recovered. For the treatment of RF, he received oral Sairei-to at a dose of 9.0 g/day. The right nephrostomy tube was removed three months after the start of administration of Sairei-to when there was little ureteral obstruction. He has been doing well with continuous administration of Sairei-to and right ureteral stream has been excellent for more than two years (Figs. 2c, d).

## DISCUSSION

Sairei-to (TJ-114, Tsumura & Co., Japan) is a Chinese (Kampo) herbal medicine which contains twelve herbs (Table 1). It is being used for the management of chronic glomerulonephritis<sup>6)</sup> and other immunological disorders<sup>7,8)</sup> in Japan. In MRL/lpr mice, which spontaneously develop lupus-like autoimmune disorders, showed improvement of proteinuria and histochemical findings of the glomeruli when treated with Sairei-to<sup>9)</sup>. In the field of urology, it is sometimes used for the treatment of RF<sup>4,5)</sup>. Matsuoka reported two cases of idiopathic RP for which Sairei-to was effective<sup>4)</sup>. In the first case, hydronephrosis improved after administration of Sairei-to for 9 months without ureteral stenting or nephrostomy. In the second case, Sairei-to was effective for the treatment of the recurrence of idiopathic RF after discontinuation of corticosteroids.

The precise mechanism of the effects on these autoimmune diseases remains elusive. Sairei-to is a combination of two prescriptions, Shosaiko-to and Gorei-san. Recent chemical analyses have revealed that Saikosaponin from Bupleurum root and Ninjin-

saponin from Ginseng root enhance the effects of intrinsic glucocorticoids. Glycyrrhizin from Glycyrrhiza root has both a glucocorticoid-like effect and an anti-allergic effect<sup>6)</sup>. In a rat model, administration of Sairei-to reduced the negative feedback effect of corticosteroids on the hypothalamus and pituitary gland and accelerated the recovery of hypothalamic-pituitary-adrenal axis<sup>10)</sup>.

Two-thirds of RF has been considered to be idiopathic. A recent study suggested that idiopathic RF is not truly idiopathic, but is related to an immune-mediated periaortitis<sup>1)</sup>. The most commonly employed medical management is with corticosteroids. There are many case reports of patients with RF who were successfully treated with corticosteroids<sup>2,3)</sup>. However, this management with corticosteroids generally requires high dosing and long-term administration (e.g., prednisolone 60mg on alternate days for 3 months)<sup>3)</sup>. It could be associated with severe adverse effects such as immunodeficiency, gastric ulcer and osteoporosis. In addition, RF could reappear after discontinuation of administration of corticosteroids<sup>3)</sup>. In contrast, Sairei-to is rarely accompanied by these side effects even when administered for a long time.

Today, there is no consensus about how long patients should be administered with Sairei-to for the treatment of RF. In chronic glomerulonephritis in children, the duration of administration is generally 6–12 months. We propose that Sairei-to administration should be continued for more than one year as far as it works effectively for the prophylaxis of recurrence.

In conclusion, we reported two cases of retroperitoneal fibrosis successfully treated with Sairei-to, a Chinese herbal medicine. Long-term administration of Sairei-to is safe and effective for the treatment of ureteral obstruction caused by both idiopathic and artificial graft-induced RF. We therefore recommend Sairei-to as the promising alternative for the conservative management such as corticosteroids.

## REFERENCES

- 1) Martina FB, Nuech R and Gasser TC: Retroperitoneal fibrosis and chronic periaortitis: a new hypothesis. *Eur Urol* **23**: 371–374, 1993
- 2) Baker LR, Mallinson WJ, Gregory MC, et al.: Idiopathic retroperitoneal fibrosis: a retrospective analysis of 60 cases. *Br J Urol* **60**: 497–503, 1987
- 3) Kardar AH, Kattan S, Lindstedt E, et al.: Steroid therapy for idiopathic retroperitoneal fibrosis: dose and duration. *J Urol* **168**: 550–555, 2002.
- 4) Matsuoka Y, Kobayashi T and Oka K: Clinical efficiency of Sairei-to to the idiopathic retroperitoneal fibrosis and the ureteral structure after reanastomosis. *Rinsyou Hinyoukika* **55**: 643–646, 2001
- 5) Mitsuzuka K, Suzuki K and Takeuchi M: A case of idiopathic retroperitoneal fibrosis causing acute renal failure and markedly responsive to drug

- therapy. *Hinyokika Kyo* **47** : 777-780, 2001
- 6) Kimura K, Nanba S, Tojo A, et al. : Effects of sairei-to on the relapse of steroid-dependent nephrotic syndrome. *Am J Chinese Med* **18** : 45-50, 1990
- 7) Takakuwa K, Ishii K, Takaki Y, et al. : Effect of sairei-to combined with aspirin and prednisolone on four recurrent reproductive failure women who are positive for anti-phospholipid antibodies. *Am J Chinese Med* **31** : 659-663, 2003
- 8) Ouchi T, Kanzaki J and Tsuchihashi N : Clinical analysis of steroid-responsive sensorineural hearing loss. *Auris Nasus Larynx* **20** : 79-93, 1993
- 9) Ito T, Seo N, Yagi H, et al. : Unique therapeutic effects of the Japanese-Chinese herbal medicine, Sairei-to, on Th1/Th2 cytokines balance of the autoimmunity of MRL/lpr mice. *J Dermatol Sci* **28** : 198-210, 2002
- 10) Tozawa F, Dobashi I, Horiba N, et al. : Saireito (a Chinese herbal drug) decreases inhibitory effect of prednisolone and accelerates the recovery of rat hypothalamic-pituitary-adrenal axis. *Endocr J* **45** : 69-74, 1998

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## 和文抄録

## 柴苓湯が有効であった後腹膜線維症の2例

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後腹膜線維症では、後腹膜における炎症のため線維芽細胞が増殖、尿管を閉塞させる。以前は尿管剥離術がその治療に行われていたが、現在はステロイド内服を中心とした保存的方法が主体である。

柴苓湯は漢方薬の1つであり、抗炎症作用と抗アレルギー作用をもつ。そのため後腹膜線維症の治療に柴苓湯は本邦においてしばしば使用される。

今回われわれは特発性後腹膜線維症と人工血管による血管周囲炎からくる後腹膜線維症の2例に対し柴苓湯が有効であった症例を報告した。

柴苓湯にはステロイドにみられる免疫不全、胃潰瘍、骨粗鬆症などの副作用がないため、後腹膜線維症に対するステロイド内服治療の代替になりうる。

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